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"Visual Indexes" and Standardized Storage for Large Collections of 35mm Slides

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"Visual Indexes" and Standardized Storage for Large Collections of 35mm Slides

Abstract

35mm slide collections often overwhelm institutions that would like to accept them but do not have resources for item-level cataloging and access. An approach to storage and collection-level access by way of systematic sleeving and photography of groups of slides provides visual access to the image content of slides while maintaining the collection's physical safety. PDF format documents containing images of slide groups allows distribution and remote viewing of collection content without item-level cataloging or in-person physical inspection.

Keywords
35mm slides, contact sheets, pdf, access, archival processing

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The 35mm positive slide and the 35mm negative were the dominant form of photography and visual documentation in the later half of the twentieth century. The nineteenth century left us cabinet cards and albumen prints, and the twenty-first century gives us hard drives full of jpg files, but the majority of the twentieth century's photographic record exists as small photographic transparencies.

Over the last hundred years, most institutions of higher education have built large teaching collections of photographs, usually for image intensive fields such as the history of art and architecture, studio art, and architecture practice. The 35mm slide, of course, was more or less the most popular of formats in these collections. These slide libraries or visual resource collections tend to cover the history of architecture and art with individual images or groups of images serving as surrogates for the art works and buildings under study. These collections are valuable by holding individual images in a breadth and depth that matches the teaching needs of an institution. We are, of course, familiar with these kinds of collections and may have served as curators, librarians, or staff overseeing one.

Scholars, on the other hand, tended to build personal slide collections in parallel to institutional collections, documenting their research interests or their studio work as they evolve over a career. These collections of similar large groups of slides are valuable as a whole – as entities in themselves.

If you have historians, architects, designers, or artists on your faculty, chances are that they created, used, and still have many 35mm slides. Chances also are that as faculty retire and clean out their offices, they will look to visual resources collections and related libraries or archival repositories to take in their slide collections. Otherwise, there is the real possibility that these collections may be disposed of and lost.

Visual resources collections commonly face this very scenario: a faculty member, graduate student, alumnus, or friend donates (or would like to donate) a collection of slides to the institution. These slide collections consist of, for the most part, personal or professional slides taken over the course of a research project or a career. In some cases, these collections are huge, containing many thousands of individual 35mm slides. Usually, these slides are not copy photography: often every slide is an original photograph, that is, every slide is the film that was in the photographer's camera. These are primary source materials: records of travel, research, site visits, inspiration, and documentation. These donated, or "legacy", collections of slides are by their nature very different from traditional academic teaching collections or slide libraries.

Donated 'legacy' collections: often a career's worth of slides.

The College of Environmental Design (CED) Visual Resources Center (VRC) at University of California, Berkeley (UCB) is in the fortunate position of maintaining its "traditional" 35mm slide collection, consisting of teaching slides from three departments in the College (Architecture, Landscape Architecture, and City Planning), while taking on responsibilities of digitizing archival documents and assisting our sister unit, the Environmental Design Archives (EDA), in managing collections of archival photographs. In these latter responsibilities, the VRC staff works extensively with collections of 35mm slides that are not traditional teaching collections, but rather faculty research and documentary material. Rather than approaching these photographs as a large number of individual images, we approach them as archival collections. As archival collections, we catalog and make them available for use at a collection level, rather than at the individual item level.

In the past, the CED Visual Resources Center, when faced with a donation of a large collection of this sort, out of necessity tended to cherry-pick individual slides from it, and then pass the remainder on to other institutions or dispose of them, often destroying the integrity of the research collections as a whole. In a similar vein, the Environmental Design Archives, also faced with the constraints of space, funding, and staffing, was frequently reluctant to accept large numbers of slides[1] because of the challenges of physically storing them. The popularity of the 35mm slide in professional practice and popular use often meant that the slide portion of a

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[1] *This continues to sometimes be the case; the CED VRC recently turned down a collection of approximately ninety thousand slides simply because the size was unmanageable.*

manuscript collection would be as large as, or larger than, the textual materials and drawings.

> Collection on the History of Design. The collection of
> 6000 slides, at the current market value of $2.50 per slide,
> is valued at $15,000.00. We will be adding selected slides
> to our Collection this Spring.
>
> This will be very helpful for our classes.
>
> Sincerely yours,

Portion of a 1984 letter to a donor: choosing individual slides from a collection for inclusion in a slide library.

These approaches reflected the times and conditions that our libraries faced in the twentieth century, where we faced physical space and staffing issues that precluded "taking them all" when donated collections came our way. Slide libraries and traditional visual resources collections had to carefully consider each accession of slides into the collection. This process of choosing individual slides was a form of curation and appraisal, where we would look at the slides, compare them to our current holdings, and choose slides that would augment or complement the existing teaching collection. This was a necessity because the full costs of processing a single 35mm slide could amount to several dollars apiece, when staff time and materials were fully considered.

In the realm of visual resources, we operate on a level where we catalog images at the item level. I think of this as "from the bottom up." We primarily describe what is depicted or the content of the image - an art object, or a building, or a subject depicted in the photo. Our guiding cataloging standards and metadata schema promote this very well. We have even developed a two-tier metadata model so that we can describe the content of the image (the work depicted) and the image itself (the view) at the same time.[2]

Because visual resources collections are created and maintained for teaching, in general consisting of well-documented images that scholars can study, cite, and refer to, the focus on the individual image is completely appropriate. Our analog teaching collections were cataloged, arranged, and labeled with this individual interaction in mind. Our digital image collections are now cataloged similarly, at the item level, but the order of the images in a physical collection is no longer the priority, rather quality metadata for online discovery. It is completely appropriate to describe each slide or digital image to the individual level for these uses.

Archival collections of records or papers are groups of items. This material is described fully at the collection level – "from the top down." In the Archives context, collections are less commonly described down to the item level. The cataloging deals with detailed and specific information about the context and creator of the collection with more general information about the individual items contained within.

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[2] *Cataloging Cultural Objects: A Guide to Describing Cultural Works and Their Images* (http://cco.vrafoundation.org/) and *VRA Core 4* (https://www.loc.gov/standards/vracore/)

Unlike the visual resources world, the guidelines and tools[3] for describing archival collections are geared towards interaction with these collections in large units-- sometimes intellectual, such as a series or subseries, and sometimes physical, such as a folder or a carton. Archival collections are created and maintained for research use. These collections consist of original documents and data to be examined and interpreted, so it is entirely appropriate to describe these collections at an aggregate level. Of course, scholars are ultimately most excited about individual items within the archive, and in a perfect world would have instant access to digital reproductions of any given item in the archive along with descriptive data about it. Unfortunately, there are very few institutions that have the capability to digitize and catalog archival collections to the item level.

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[3] *Describing Archives: A Content Standard* (http://www2.archivists.org/standards/DACS) and *Encoded Archival Description* (http://www.loc.gov/ead/)

In the present, the close working relationship between the Visual Resources Center and Environmental Design Archives at the College of Environmental Design allows us to place large donated slide collections in an archival research context instead of a visual resources context. This shifts the value of the slides from their individual content to their collection context. The content is still ultimately important. There are some incredible photographs in these collections, but the provenance, order, and grouping of the slides takes on a more prominent meaning.
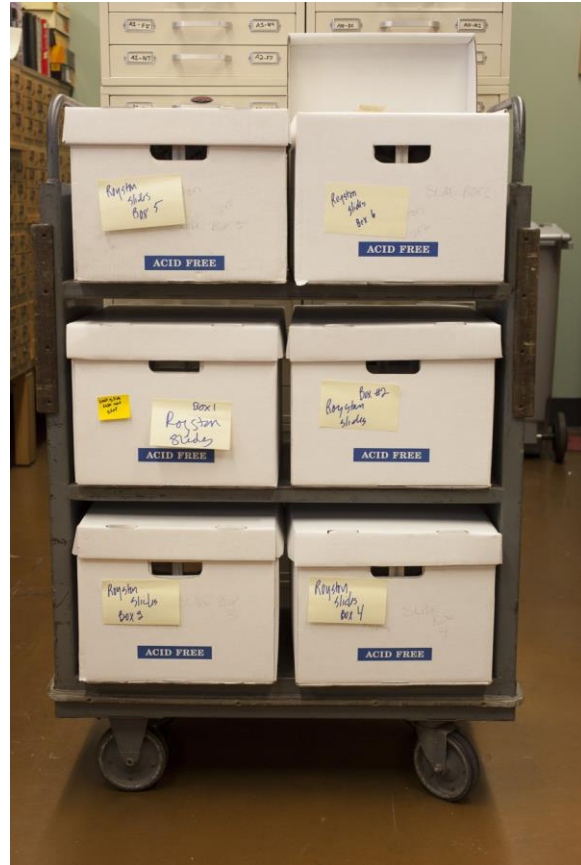
A collection of 35mm and 120 slides chronicling a Landscape Design firm's work filling six tightly packed cartons.

When we started to view these large collections of slides as discrete archival collections instead of as groups of material to draw individual visual resources items from, we still faced challenges in providing for safe bulk storage and easy access to the slide images.

Slides, unless mounted in glass, are actually quite fragile. How do we provide safe, yet useful, physical access to this volume of material, so people can see it? Intellectual access is also a problem. If we are not item level cataloging, how do we describe in bulk a mass of photographs without resorting to generalizations? We decided to tackle these slides at the collection level.

When deciding to accept a large collection of slides, donors often assert or assume that we can "just digitize them all" and that this will solve the issues of storage and access. There are several problems with this approach: institutions most likely do not have the resources to "just digitize" ten, fifteen, or twenty thousand slides. The challenge of storing originals is not solved by digitization. And, of course, digital files need metadata. Ten thousand image files without

cataloging are pretty much useless. In most cases, the only metadata that is present is what has been written on the slide mounts. Most institutions do not have the resources to catalog ten, fifteen, or twenty thousand images at a time. That is an incredible amount of work for a collection where the overall context may be just as important as the individual images. We need to stick with collection-level description.


A typical donated collection at the College of Environmental Design VRC.

Our overarching challenge is to provide access to these thousands of tiny photographic images efficiently, without spending too much time or using up too many resources. Based on our experiences, we have come up with this general plan of action:

1. physically arrange the slides so that they are easy to handle and store;
2. create inventories to intellectually organize the slides by describing them at a group or collection level;
3. digitize at the collection level, by making digital contact sheets.; and,
4. allow archive users' research needs to determine whether items in such a collection should be digitized for further use and made accessible at the item level.

You may remember contact sheets from analog photography, where strips of negatives were printed on a single sheet of paper to get an overview of the contents of a roll of film. It is a way to access the content on the transparencies without repeatedly handling the film. It is not so important that the reproductions are small, nor individually described. The contact sheet is a general access tool-- an intermediary between raw film and finished print. It is not intended to

provide fully usable reproduction of the collection material, but to provide visual access to collection material.
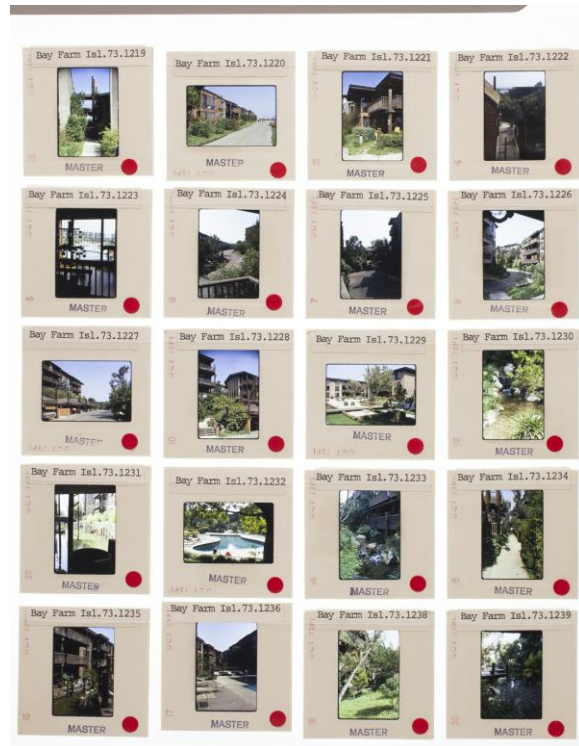
On the left, an analog contact sheet, made by placing negative strips on photographic paper. On the right, a digital contact sheet, made by photographing a sleeve of slides on a light table.

The key to the digital version of the contact sheet is to photograph groups of slides while they are on a light table, so that the photographic transparencies are illuminated from below, while the slide mounts and any annotations that may appear on them are illuminated from above. This preserves relationships and context--including the order they are in and the annotations on the slide mounts--as much as individual images. The resulting digital photographs capture the image content, the context of the images, and any data written or stamped on the mounts.

So, to step back for a second and think about the whole situation, we have a large physical collection that we are going to keep intact. We need to keep it safe, and we are going to make an inventory, and make contact sheets of it. However, the sheer number of slides still looms.

The way to approach slide storage without driving yourself nuts is to follow the example of the 35mm slide itself and process the collection in a standardized way. Slides are remarkably standardized objects; 35mm slides from the 1940s are the same size and shape as 35mm slides from the 1990s[4]. We can standardize their storage, standardize their treatment, and standardize making contact sheets of them. Further, we can do everything in batches, so we do not have to adjust procedures or juggle different container types while we are working through all the slides.

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[4] *The only appreciable variation among 35mm slides is thickness; glass and tape bound slides are thicker than plastic (for example, Gepe brand mounts), and both are thicker than photo lab cardboard mounts. Thickness is not an issue for polypropylene slide sleeves unless unusually thick glass and tape mounts are present.*

Examples of some of the containers slides arrive in.

Our slides come to us in many containers: plastic slide files, bulky slide holders, carousels, little yellow slide boxes fresh from the processing lab, metal slide cases, and often, little bundles held together with rubber bands. These kind of containers are wholly unsuited to long term storage, not only from a preservation point of view, but also in terms of space efficiency. Most of these containers are not standardized, at least in respect to each other.

The most standard form of slide storage is a polypropylene slide sheet. Each sheet holds twenty slides. These sheets are more or less the same size as U. S. letter-size paper. This size is very important because after the slides are in sheets, we can treat the sheets like pieces of paper. This is important because the 8.5 by 11 inch letter-size sheet is a standard shape that much of our office and software infrastructure is built to accommodate (e. g., printers, filing cabinets, binders, word document defaults, etc.).

Slides sleeved in letter size polypropylene sheets, which fit in letter size folders, which fit in document boxes.

In general, twelve or more sheets of slides fit into a standard file folder. These folders are then organized into document boxes, which are usually the standard archival container, or they can hang in a filing cabinet or line up in banker boxes. In general, you can fit five folders of twelve sheets in a document box, which takes up a little more than five inches of shelf space. That is 1200 slides, per document box, which is pretty compact. These numbers assume paper mounted 35mm slides, not glass or Gepe mounts, which are more bulky.

The beauty of using polypropylene slide sheets is that you can hold a sheet up, or place it on a light table, and see twenty slides at once. The slides are protected from dust and fingerprints. You can read the annotations and captions that are written on the slide mounts, see the dates stamped on the mounts, and perhaps read the type of film each slide is made of.

Visual access by direct viewing of images.

I think it is important to have this kind of visual access. This can be hard to explain, but I think of it as "letting people use their eyes." Each individual slide contains two kinds of information that really are the heart of their usefulness: annotations and dates; and, of course, the image itself. In terms of annotations, this slide is typical:

We have some locations: a city and a street. We have a caption or description ("signs"). We have two dates: written and stamped. We have some notations that seem to reference other photographs or perhaps a publication figure number. There are sequence numbers: the frame number and a number applied by the owner. All this information is potentially important. Transcribing this information, at an individual scale, would be extremely time consuming.

Without transcribing this information, the only access we can provide is visual access, which makes perfect sense for visual material. If you were to let someone look at the physical slides, they would put them on a light table and use their eyes to pick out what they want. The digital contact sheet reproduces this visual access on a screen.

You can create a balance between textual and visual access by using a general inventory to give context, but then allowing visual access to examine the actual photos. Creating an inventory is as straightforward as making a list at the same time as sleeving the slides. An inventory can be based on the divisions the slides are already in, like boxes, cases, sections of cases, and so on. We try to reuse the intellectual groupings the owner used, maintaining the order that the owner left the slides in. In the absence of donor supplied categories, box numbers or dates can be used-- whatever information is available. It is only an inventory, not an item-by-item description.

Rehousing slides in sleeves can take a considerable amount of time and material, but the effort repays itself by housing the collection in a stable protective form that should keep the slides safe for a very long time.

This is the collection pictured earlier, processed as outlined. It turned out to consist of almost twenty-two thousand slides at twenty slides per sheet, twelve sheets per folder, five folders per box, in eighteen boxes.

Creating the digital contact sheets is straightforward. We basically photograph the slide sheets on a light table. A small light table is placed on a copy stand. We use cardstock to make a positioning guide for the slide sheets. A DSLR with a 50mm macro lens works fine.

It is important to standardize every aspect of the photography--the position of the sheets, the focus, the exposure, the lighting--to facilitate the process. Large collections can be rapidly photographed when the subject placement, lighting, and exposure are consistent. It is important to shoot all the photographs in the same way, so that they all can be post-processed in the same way – and all at once. Sometimes we take photos of slide boxes or other important ephemera, if they contain useful information, and include them alongside the contact sheets**.** Negatives, if sleeved in letter-size polypro sheets, can also be included. In this case the images can be inverted in post processing to see them in their positive form.

The view from the camera: this photograph shows a slide sheet on small light table placed on copy stand bed. A simple cardboard jig is taped along two sides of the light table to hold sheets in exactly the same position. Piles of unphotographed sheets are on the right and already photographed sheets are on the left. In practice, the camera will be much closer to the slides, and only a small crop (and a quarter-turn rotation) will be needed to reduce it from the camera's 8x12 ratio to the needed 8.5x11.

When photography is done, images are processed in batches. If the photography was standardized, every image file can be treated the exact same way. With a camera full of images of slide pages, we import the files into Adobe Lightroom. Adjustments are made to the first photo: cropping to our letter-size proportion (it is a default crop size, thanks to that letter-size standard) and perhaps color balancing. Because all the photos have been taken the same in terms of layout and exposure, the color adjustments and the crop can be applied to all the photographs at once. This is a key step. No one has time to individually crop several hundred images. You have to do it all at once for this to make sense in terms of efficiency, because some of these collections may have hundreds of sheets.
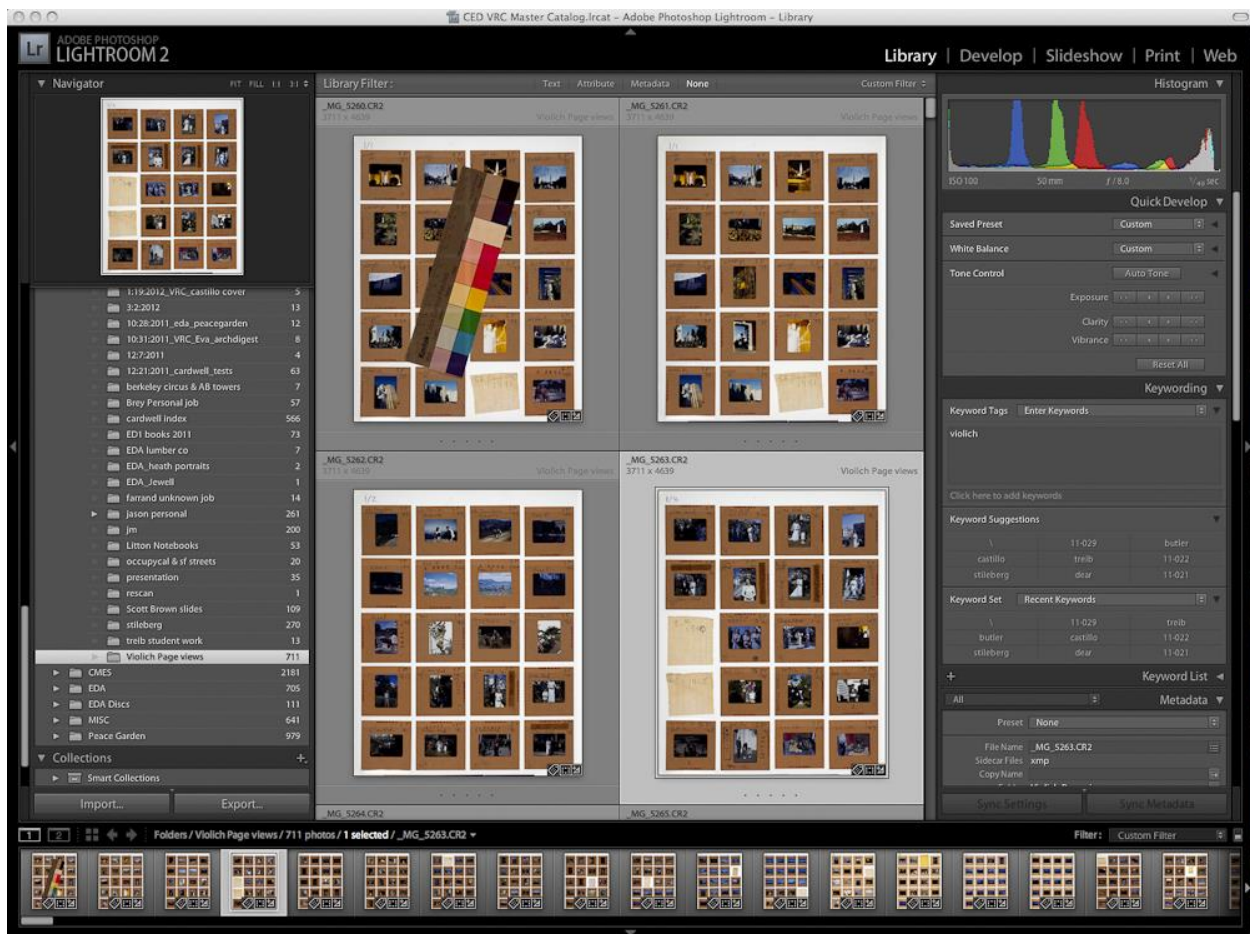
Photographs of slide sheets being batch processed in Adobe Lightroom.

The slide page images are then exported from Lightroom as relatively low-resolution JPEG files, which are assembled in Adobe Acrobat with the inventory that we created when we sleeved the slides. This inventory is linked to the corresponding pages in this document. A cover sheet is created that explains the context of this "visual index" document.

The overall result is a .pdf file which enjoys all the benefits of a .pdf: it can be read by anyone with a computer or a tablet, sent via email, linked to from web pages and OPACs, etc. The index provides a literal overview of the collection, that we can deliver to a researcher's, or donor's, desktop. Users can zoom in to see the image at a reasonably high resolution.

The slide mount and the information written there is clearly visible, and the ordering of the images is readily apparent. Researchers can compare and reference images across the entire collection without physical handling of the actual film. The visual index provides access without resorting to either repeated physical use of the material, or by laboriously describing and digitizing individual items beforehand.

The key to successfully creating the visual index is careful standardization from start to finish: storing the slides in the same way, photographing them in the same way, batch manipulating the

photographs, using a common file format, and so on. Seeing that 35mm slides were the twentieth-century pinnacle of standardization in photography, it is fitting to treat them in a standardized way.

With slides safely stored, and a visual index[5] created, we have completed what we set out to do, keeping these collections intact and safe in a research setting while providing for access. When collections of slides show up on your doorstep, having a clear plan for how to accommodate and provide access to the slides will make the choice to accept such a collection easier.

This method of treating slide collections accomplishes several things that are central to our practices in cultural institutions. It provides physical and intellectual protection of collection material. It allows for relative ease of access appropriate to the material type. And it does so with the minimal outlay for materials and staff time, by using standardized storage systems and common software. Perhaps most importantly, it allows us to preserve collections of slides – collections of photographs – that may otherwise be discarded or broken up because of issues of storage, fragility, difficulty of access, or perceived unimportance.

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[5] *A sample visual index is attached to this article as a supplemental file. It consists of a cover page and five sample pages.*